



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,674	08/06/2002	Jih-Fon Huang	ADTP0034USA	5332

27765 7590 07/07/2004

NAIPO (NORTH AMERICA INTERNATIONAL PATENT OFFICE)
P.O. BOX 506
MERRIFIELD, VA 22116

EXAMINER

LEWIS, DAVID LEE

ART UNIT	PAPER NUMBER
----------	--------------

2673

DATE MAILED: 07/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,674

Applicant(s)

HUANG ET AL

Examiner

David L Lewis

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. **Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanatani et al. (4070663).**
2. **As in claim 1, Kanatani et al. teaches of a driving method of a plasma display panel (PDP) device, the PDP device comprising a first electrode and a second electrode, figure 1 items 2 and 5, column 4 lines 10-15; the driving method comprising: supplying the first electrode with a first voltage, figure 3 item E1, figure 4b item E1, column 4 lines 50-60; supplying the second electrode with a second voltage during a first time interval in which the second voltage is higher than the first voltage and a first voltage difference is equal to the second voltage minus the first voltage, figure 3 item gnd, column 4 lines 42-60 said ground supply inherent the circuit structure; and supplying the second electrode with a third voltage during a second time interval in which the third voltage is lower than the first voltage and a second voltage difference is equal to the third voltage**

minus the first voltage, **figure 3 item E2, column 4 lines 50-60**. Wherein Applicants figure 7 corresponds to Kanatani's figure 4b.

3. **As in claims 2 and 11, Kanatani et al. teaches of** wherein the second voltage is positive, figure 3 item gnd, and the third voltage is negative, figure 3 item E2, wherein DC gnd is positive, column 4 lines 42-60.
4. **As in claim 3, Kanatani et al. teaches of** wherein the PDP device further comprises: a first power supply for supplying the first electrode with the first voltage, figure 3 item E1, column 4 lines 40-67; a second power supply for supplying the second electrode with the second voltage, figure 3 item gnd, column 4 lines 40-67; a first switch electrically connected to the second electrode and the second power supply, figure 3 item Sw1, column 4 lines 40-67, column 5 lines 1-10; a third power supply for supplying the second electrode with the third voltage, figure 3 item E2, column 4 lines 40-67, column 5 lines 1-10; and a second switch electrically connected to the second electrode and the third power supply, figure 3 item Sw2, column 4 lines 40-67, column 5 lines 1-10; the driving method further comprising: turning on the first switch during the first time-interval for supplying the second electrode with the second voltage so that the voltage difference between the first electrode and the second electrode is held at the first voltage difference, figure 4b item a, column 4 lines 60-67, column 5 lines 1-10; and turning on the second switch during the second time-interval for supplying the second electrode with the third voltage so that the voltage difference between

the first electrode and the second electrode is held at the second voltage difference, figure 4b item c, column 4 lines 60-67, column 5 lines 1-10.

5. **As in claim 4, Kanatani et al. teaches of** wherein the PDP device further comprises a display panel, which is viewed as an equivalent capacitor, and an inductor for making the voltage difference between the first electrode and the second electrode oscillate between the first voltage difference and the second voltage difference through a combination of the inductor and the equivalent capacitor, figure 3, figure 4a and 4b, column 4 lines 60-67, column 5 lines 1-10. Wherein figure 3 illustrates said equivalent circuit, voltages applied as shown in figure 4a and 4b.
6. **As in claim 5, Kanatani et al. teaches of** wherein the PDP device further comprises a third switch electrically connected to the inductor, figure 15 item Sw3, column 16 lines 63-67; the driving method further comprising: turning on the third switch during a third time-interval, which is between the first time-interval and the second time-interval, for making the voltage difference between the first electrode and the second electrode oscillate downwards from the first voltage difference, figure 16 items v2 to v3, column 17 lines 3-25.
7. **As in claim 6, Kanatani et al. teaches of** wherein the PDP device further comprises a fourth switch electrically connected to the inductor, figure 15 item Sw4, column 16 lines 63-67; the driving method further comprising: turning on the fourth switch during a fourth time-interval, which is after the second time-interval, for making the voltage difference between the first electrode and the

second electrode oscillate upwards from the second voltage difference, figure 16 items v3 to v4, column 17 lines 3-25.

8. **As in claim 10, Kanatani et al. teaches of driving method of a plasma display panel (PDP) device, the PDP device comprising a first electrode and a second electrode, figure 1 items 2 and 5, column 4 lines 10-15; the driving method comprising:)supplying the first electrode with a first voltage, figure 3 item E1, column 4 lines 60-67; supplying the second electrode with a second voltage during a first time interval in which the second voltage is higher than the first voltage and a first voltage difference is equal to the second voltage minus the first voltage, figure 3 item gnd, figure 4a item b, column 5 lines 5-15; supplying the second electrode with a third voltage during a second time interval in which the third voltage is lower than the first voltage and a second voltage difference is equal to the third voltage minus the first voltage, figure 3 item E2, figure 4b item c, column 5 lines 1-10; making the voltage difference between the first electrode and the second electrode oscillate downwards during a third time-interval, which is between the first time-interval and the second time-interval, from the first voltage difference to the second voltage difference, figure 4b item a-d, column 5 lines 1-15; and making the voltage difference between the first electrode and the second electrode oscillate upwards during a fourth time-interval, which is after the second time-interval, from the second voltage difference to the first voltage difference, figure 4b item d to a, column 5 lines 1-15.**

Art Unit: 2673

9. **As in claim 12, Kanatani et al. teaches of** wherein the PDP device further comprises a display panel, which is viewed as an equivalent capacitor, and an inductor for making the voltage difference between the first electrode and the second electrode oscillate between the first voltage difference and the second voltage difference through an oscillation generated from the combination of the inductor and the equivalent capacitor, figure 3, figure 4a and 4b, column 4 lines 60-67, column 5 lines 1-10. Wherein figure 3 illustrates said equivalent circuit, voltages applied as shown in figure 4a and 4b, wherein said oscillation is shown.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanatani et al. (4070663).**
11. **As in claim 6-9, Kanatani et al. fails to teach** of said fifth through seventh switches as claimed however said improvements to the device of Kanatani would have been an obvious design choice within the scope of Kanatani's teaching give the addition of switches Sw3 and Sw4 in the change from figure 3 to figure 15. Said switches five to seven would have been an extension of the same

Art Unit: 2673

improvement provided from figure 3 to figure 15 as shown, wherein Kanantani enhances the voltage controlled oscillation of the circuit, as found in claims 6-9.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. 2003/0090440, 6011355, 6150999, 6628275, 6160531, 2002/0030642.
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David L. Lewis** whose telephone number is **(703) 306-3026**. The examiner can normally be reached on MT and THF from 8 to 5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached on (703) 305-4938. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Art Unit: 2673

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

June 28, 2004

A handwritten signature in black ink, appearing to read 'Vijay Shankar', with a stylized, cursive script.

**VIJAY SHANKAR
PRIMARY EXAMINER**